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ABSTRACT

An overview is provided of the activities of the President's Study Group on Student Learning Outcomes, established in 1990 at Lehigh County Community College to identify associate degree and certificate competencies and to develop strategies for their implementation and assessment. Introductory materials list the Study Group's members and review its history and responsibilities. Next, a rationale, related classes and activities, measurement tools, and a "feedback loop" of followup surveys and audits are recommended for each of the following competencies: (1) competence in a program of study; (2) ability to think critically and creatively in new situations; (3) ability to communicate effectively with expressive and receptive skills; (4) ability to work with others; (5) ability to recognize relationships between academic disciplines; (6) ability to apply quantitative reasoning; (7) ability to use computers and related technology; (8) ability to conduct research using appropriate information systems; (9) ability to observe, analyze, and appreciate the human experience through the humanities and social sciences; (10) awareness of a person's role in the natural world and ability to react to and shape the environment; (11) ability to make ethical decisions in career and personal relationships; (12) the opportunity to gain confidence in one's academic potential and enhance one's self-image; and (13) ability to assess one's own skill levels, academic potential, and personal and professional strengths and limitations. The report concludes with six broad recommendations concerning competency implementation and assessment. Appendixes provide an array of Study Group materials, such as meeting minutes and a critical test review of the Collegiate Assessment of Academic Proficiency. (JMC)

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Lehigh County Community College

**REPORT TO THE PRESIDENT
ON
STUDENT LEARNING COMPETENCIES**

Spring, 1992

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Submitted by the

President's Study Group on Student Learning Competencies

Michael J. McGovern, Chair

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Lehigh County Community College

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Dear Dr. Barthlow:

On behalf of the President's Study Group on Student Learning Competencies, we are pleased to present you with this report.

In response to the charge which you gave to this study group in Fall 1990, we have identified and reported a set of thirteen (13) competencies which we believe the associate degree and certificate programs at LCCC should value and incorporate. We have further developed a number of strategies to assess the extent to which each competency is addressed within an LCCC education. Finally, we have suggested feedback mechanisms through which the strengths and weaknesses of the educational process can be channeled back to the curriculum and the teaching/learning process.

Please note that the measurement techniques recommended are both anecdotal and quantitative. This multifaceted approach to assessment with an emphasis on measurement of qualitative or "real life" experiences is consistent with the professional literature on assessment and the experience of institutions already deep into the assessment process. As the quantitative piece, we are recommending the Collegiate Assessment of Academic Proficiency (CAAP), an ACT standardized exam. The study group examined several instruments designed to measure institutional effectiveness, and while each has its strengths and deficiencies, the CAAP appears related enough to our competencies to warrant a pilot study over the next few years.

In compiling the competencies and accompanying measurement tools we were always aware that our recommendations might be perceived by faculty colleagues and others as intrusive, prescriptive, or evaluative. As a group, we believe none of that to be true. However, we are also mindful that the success of assessment at LCCC depends upon the willingness of the faculty to accept a climate of institutional assessment and to be active partners in the assessment process. Consequently, we will ask each individual faculty member to integrate these competencies into his/her own program in a way that makes sense within that discipline, division, and course. In this way, we believe the competencies to be general academic value statements and guideposts as opposed to directive or prescriptive fiats.

It is our hope that this report will be only the beginning of an ongoing assessment program here at LCCC. Throughout the eighteen months that the group has worked together, it became increasingly apparent that, while the task was arduous and frustrating as a mandatory exercise, it was also educationally refreshing and, at times, inspiring. Working on this group has convinced us that the work of assessment can and should continue at the divisional, program, and course level at LCCC. To this end, we have included among our recommendations a suggestion that this group or a similar body be appointed as a continuing committee on assessment to oversee the integration of effective assessment techniques into the curriculum and other sectors of the college culture.

In short, this report represents a great deal of challenging, exhaustive, and rewarding work by a talented and diverse group of faculty and administrators. It is our hope that the report and its recommendations will become the foundation for an ongoing assessment movement which will benefit the college and its students for years to come.

Sincerely,

The President's Study Group
May, 1992

TABLE OF CONTENTS

Members of the President's Study Group	1
History of the Study Group	2-4
The President's Charge to the Study Group	5
The Competencies	6-18
Recommendations	19-20
Appendices	

Members of the President's Study Group

Michael J. McGovern, Ed.D. (chair)	Vice President for Academic and Student Affairs
George E. Blyler	Professor of Mathematics
Mary Ann Buss	Former Associate Professor of Accounting
John Callahan	Associate Professor of Reading
William S. Davenport	Dean of Business, Science, and Technology
Robyn L. Dickinson	Institutional Research and Planning Officer
John H. Gauger	Professor of the Social Sciences
Joanne Gerken	Professor of English
Ralph Kemmerer	Professor of Automotive Technology
Diane M. McDemus	Professor of Physics
Kevin J. McGovern, Ph.D.	Dean of Humanities, Mathematics, and Learning Assistance
Margaret McMenamin	Associate Professor of Physical Therapy
Virginia Mihalik	Cluster Counselor - Humanities, Mathematics, and Learning Assistance
Robin A. Musselman, Ed.D.	Dean of Student Services
Evelyn Petrash	Assistant Professor of Physical Therapy Assisting
Ned W. Schillow	Professor of Mathematics
Thomas K. Tate	Professor of Computer Information Systems
Ronald L. Virden	Professor of Mathematics

History of the Study Group

In Fall 1990, Dr. Robert L. Barthlow, President of Lehigh County Community College, established a collegewide system to address the question of institutional effectiveness. The three principal components of this system were:

1. Implementation of institutional effectiveness procedures by the college research office
2. Revision of the annual program review process
3. A plan to assess to student learning outcomes

The President's Study Group on Student Learning Outcomes was established to address the third component of this system. Dr. Barthlow appointed Dr. Michael J. McGovern, Vice President for Academic and Student Affairs, to chair this group. The study group was charged to identify student competencies which the college believes should be represented by the associate degree and certificate, and to develop a strategy to assess those competencies (see page 5). This was the first time any group at LCCC had been charged with such a task. Fifteen additional faculty members and administrators were appointed to complete the group's membership. Since that time, three of the original members have left the group. The new Dean of Business, Science, and Technology joined the group because of his experience with the assessment efforts at Broome County Community College, NY. In addition, two faculty members were appointed as replacements for the 1991-92 academic year. In September 1991, the new Institutional Research and Planning Officer joined the study group as a resource person. Throughout the process, the group has been able to maintain its coherence and direction despite these changes in size and composition.

The study group first met on February 5, 1991. Since that time it has met in general session semi-monthly. The first few months were spent reviewing the available literature regarding the assessment of student learning. Based upon the information found there, the group attempted to define the terms and concepts which they would need to address their charge. Throughout the spring semester of 1991, progress was more philosophical than operational. The committee focused on global educational topics, the mission of the college, and the nature of the teaching/learning relationship. During these months, a critical sense of trust and intellectual candor was established. While specific progress beyond a shared perspective appeared minimal, in retrospect these initial meetings established the academic parameters which would later be used in framing meaningful competencies.

Through the summer, several members of the study group attended conferences on assessment and related issues. When the committee reconvened in September 1991, the group had established a sense of direction and a growing confidence about working within the concept and philosophy of assessment.

The professional literature on assessment recommended identifying institutional goals by looking for central or recurring themes in its documents and other publications. By examining these internal statements, it was possible to discover the college's mission as it actually manifests itself within the daily operations of the college.

As a result, the study group compiled and analyzed a host of institutional documents that identified learning priorities and skills. These included the college catalogue, viewbook and other admissions literature, course outlines, and student responses to transfer and employer surveys.

Concurrently, an inventory consisting of the assessment tools presently being used throughout the college was compiled. While compiling the inventory, it became evident that, as the literature had indicated, the community college has an advantage over other types of institutions in the area of assessment. Due to its open admissions policy, its public nature, and the increasing demand for accountability in education, the community college often has a variety of assessment tools already in place. Such measures may be used for guiding student placement, evaluating community needs, or determining the employability of graduates. These surveys and other feedback techniques were invaluable in providing support for the assumptions upon which much of the group's work rests.

Based on the documents read and their subsequent analysis, a set of priorities began to emerge that eventually became the working set of competencies listed in this document. As each competency emerged, it was examined by the group for consistency with the mission, applicability across the curriculum, and potential for measurement.

Throughout the eighteen-month process, the study group was guided by the Framework for Outcomes Assessment (Commission on Higher Education, Middle States Association, 1991). A fundamental benchmark utilized during the group's work was the set of "questions for assessment" provided by the Commission:

1. What should students learn?
2. How well are they learning it?
3. How does the institution know?

The direction provided by this document has been a key factor in maintaining the group's progress toward the completion of its charge. An integral component of defining the competencies in functional and measurable terms has been persistent attention to the teaching-learning-assessment-improvement loop. The format adapted for each competency listed below represents the study group's attempt to create a loop in which each skill is defined in terms of its implementation. For each competency, several measurement tools are described and a feedback loop is incorporated in order to provide a means by which to continually improve the teaching-learning process. As recommended by the commission and other sources, the group gave as much attention to the anecdotal or qualitative means of assessment as they did to quantitative methods.

The study group found itself constantly questioning and challenging institutional myths, assumptions, and perceptions which had developed throughout the history of LCCC. The addition of the Institutional Research and Planning Officer to the group in September was a significant step in moving past institutional perceptions and toward a set of competencies which were rooted in empirical or otherwise reliable evidence. Questions about course placement, computer usage, common learning experiences, incoming student quality, and transfer and employment success were all addressed systematically and with information gleaned from both the college and external sources.

Another significant contribution made by the research officer has been the ongoing collection and analysis of information regarding the assessment movement. The study group has been able to monitor its own progress by virtue of ongoing literature reviews, article analysis, and comparative data from similar institutions. This information has been summarized and shared with all members on a continuing basis.

The study group is recommending that they continue meeting beyond May 1992 in order to refine and reassess student learning outcomes on an ongoing basis. Significant issues remain, including: the relationship of the competencies to curricular reform, particularly the general education component; the strategies to be used for incorporating or embedding assessment within each division, program, and course; and the dissemination of information about the assessment movement and its importance to all members of the college community and external constituencies.

It is important for the reader to recognize the progress made by the study group in the past eighteen months. According to the literature available regarding assessment, this process typically requires two to four years. It is the measure of the study group's commitment to the charge, as well as a willingness to learn from the successes and disappointments of other institutions, that this report is presented in May 1992.

The President's Charge to the Study Group

Office of the President
LEHIGH COUNTY COMMUNITY COLLEGE
Schnecksville, Pennsylvania

NOV 1 1990

Lehigh County Community College
VICE PRESIDENT

TO: *Dr. Michael McGovern*
FROM: Bob Barthlow
DATE: October 31, 1990
SUBJECT: Study Group on Student Competencies

You may recall that I announced at Convocation, 1990, that I planned to appoint a President's Study Group to work on the matter of student competencies. The charge to the group is as follows:

1. Identify the student competencies which the college believes should be represented by the associate degree and certificate.
2. Develop a strategy to assess those competencies.

I realize this will not be easy, but I am committed to achieving the above two tasks. Vice President Michael McGovern will chair the group. The study group will present its recommendations to me after which I will hold a campus-wide meeting. I plan to have the final procedures approved by the Board of Trustees.

I have invited the chairs of the Curriculum, Academic Standards, and Student Development Committees; one representative from each academic division; and the vice president for academic and student affairs, the dean of student services, and the dean of humanities, mathematics, and learning assistance to comprise this group.

Would you be willing to serve on this study group? PLEASE LET ME KNOW BY WEDNESDAY, NOVEMBER 7.

Thanks for your consideration of this important task.

Bob

The Competencies

7

Student Competencies

Competency: **COMPETENCE IN A PROGRAM OF STUDY.**

Rationale: Competence in the program of study is the bedrock value of an institution of higher education. The college community believes that LCCC will succeed or fail on the basis of its educational strength in this area. Students in career and technical programs should possess the skills necessary for entry-level work in their chosen career. Graduates in transfer programs should be able to continue on and enjoy the same, if not more, academic success as native students at the four-year institution.

Where Taught or Reinforced:

Required courses for individual programs of study.

Measurement:

Device to be determined by faculty in each department pending approval by the group.

Measurement Tools:

Review of classroom testing.
Review of laboratory, clinical, and other practical work.
Review of student writing.
Certification/licensure exams.
Clinical/cooperative experiences.

Feedback Loop:

Academic audits.
Alumni surveys.
Employer surveys.
Transfer surveys.
Placement rates (employment and transfer).
Advisory committee input (where applicable).

PERM39-kk/PERM39-vv

Student Competencies

Competency: AN ABILITY TO THINK CRITICALLY AND CREATIVELY WHEN ENCOUNTERING NEW SITUATIONS.

Rationale: Professional literature, employer surveys, and faculty feedback all call for a generation of college graduates who can think their way through situations and problems not previously encountered. Critical thinking at LCCC will mean teaching students the process of analyzing information intelligently in order to become more effective citizens and employees. Students will learn to evaluate knowledge as opposed to accumulating information.

Where Taught or Reinforced:

All courses.

Measurement:

One hundred percent of course outlines will be reviewed during the academic audit process for evidence of teaching strategies which reinforce critical thinking. Special attention will be paid to case studies, critical incidents, hypotheticals, verbal problems, and other strategies which reinforce critical thinking.

A majority of students tested in the exit exam will be able to demonstrate critical thinking skills commensurate with the second year of college.

Measurement Tools:

Review of course outlines.

Standardized exam unit.

Faculty review of exams using Bloom's taxonomy for evidence of critical thinking .

Feedback Loop:

Employer surveys.

Alumni surveys.

Internships, clinicals, co-ops, and labs which require problem solving and critical thinking.

Academic audits.

Assessment exam to determine growth.

PERM39-kk/PERM39-vv

Student Competencies

Competency: AN ABILITY TO COMMUNICATE EFFECTIVELY WITH EXPRESSIVE SKILLS (SPEAKING AND WRITING) AND RECEPTIVE SKILLS (READING AND LISTENING).

Rationale: In the literature of educational reform and the information LCCC receives from employers and graduates, communications skills are frequently mentioned as fundamental to the educational process. The college believes that, as a minimum, students leaving with an associate degree be able to express themselves clearly and effectively in writing and in speech. Furthermore, these graduates should be similarly skilled in appropriate level of reading ability and listening ability. In many respects, all other competencies are based on this one.

Where Taught or Reinforced:

All courses.

Through Writing Across the Curriculum these skills may be introduced or reinforced in courses in every program of study.

Measurement:

One hundred percent of all associate degree graduates will successfully have completed ENG 105 or its equivalent.

Through assessment testing and effective course placement, 100% of associate degree graduates will have demonstrated proficiency in reading to successfully complete college-level work.

Measurement Tools:

Review of student writing and speaking assignments.
Classroom testing.
Review of course outlines.
Institutional assessment testing.

Feedback Loop:

Transfer surveys.
Employer surveys.
Faculty surveys.
Student satisfaction surveys.
Academic audits.

PERM39-kk/PERM39-vv

Student Competencies

Competency: AN ABILITY TO WORK WITH OTHERS.

Rationale: Increasingly complex technologies, information systems, and economic enterprises require a division of labor based on the skills of mutual cooperation and respect for others. Graduates must have the interpersonal skills necessary to work in teams, cooperate in complex tasks, and accept responsibility for their roles in organizational settings.

Where Taught or Reinforced:

Lab courses.
Clinical/cooperative experiences/internships.
Co-curricular activities/sports/clubs.
Small group activities in courses and programs:

Measurement:

A majority of employers of LCCC graduates will rate their skills in cooperation and interpersonal relations as satisfactory.

Measurement Tools:

Faculty observations of student performance.
Completed student projects.
Leadership/participation levels in co-curricular activities.
Evidence in course outlines of small group cooperation.

Feedback Loop:

Alumni surveys.
Employer surveys.
Faculty surveys.
Student satisfaction surveys.
Observations of student classroom and other experiences.
Academic audits.

PERM39-kk/PERM39-vv

Student Competencies

Competency: **WITHIN A PROGRAM OF STUDY, THE STUDENT WILL DEVELOP AN ABILITY TO RECOGNIZE RELATIONSHIPS BETWEEN ACADEMIC DISCIPLINES.**

Rationale: Students should be able to borrow skills and concepts learned in one discipline and apply them to another. In the educational process, ways of reinforcing this perspective include interdisciplinary courses, advisement to provide a holistic viewpoint, and capstone courses which provide a synthesis of their training at LCCC.

Where Taught or Reinforced:

Selected courses using interdisciplinary examples and problems in course work, e.g., statistics, accounting, history, IDS courses, sciences, etc.
The advisement process.

Measurement:

Seventy-five percent of course outlines and objectives within each program will contain interdisciplinary content.

Measurement Tools:

Exams in relevant courses.
Interviews with students.
Student writing.
Review of course outlines.

Feedback Loop:

Employer surveys.
Alumni surveys.
Academic audits.

PERM39-kk/PERM39-vv

Student Competencies

Competency: AN ABILITY TO USE/APPLY QUANTITATIVE REASONING.

Rationale: The LCCC academic community believes that students should be skilled in mathematics and quantitative thinking at a level consistent with the requirements of their program of study. In an age which will increasingly require the ability to understand and utilize data expressed in abstract or mathematical terms, it is imperative that associate degree students have demonstrable skills in that area.

Where Taught or Reinforced:

Math and science courses.
Selected social science courses.
Technology courses.
Accounting and business courses.
CIS courses.
Allied health courses.

Measurement:

One hundred percent of associate degree graduates will demonstrate quantitative reasoning skills appropriate to their program of study.

Measurement Tools:

Standardized exam unit.
Review of classroom tests.
Review of course outlines which require some quantitative reasoning to determine integration of math skills into content area.

Feedback Loop:

Employer surveys.
Alumni surveys.
Student satisfaction surveys.
Transfer surveys.
Academic audits.
Input from advisory committees.

PERM39-kk/PERM39-vv

Student Competencies

Competency: AN ABILITY TO USE AND WORK WITH COMPUTERS AND RELATED TECHNOLOGY.

Rationale: Computer literacy and familiarity with technology is fast becoming a basic skill required in every career. LCCC believes that students should have the opportunity to learn the applications required within their programs and the most basic level of skills required to operate a computer for personal use.

Where Taught or Reinforced:

Office technologies.
ENG 105.
Business.
Technologies.
CIS/computer science.
Electronics (computer repair).
Allied health.
Mathematics.
Physical sciences.
Academic and career counseling experiences.
College library usage.

Measurement:

One hundred percent of associate degree graduates will work with computers or other related technology in their program of study.

Measurement Tools:

Usage reports on computer labs and other facilities.
Review of course outlines for evidence of technology component.
Amount of usage of software in computer inventory.

Feedback Loop:

Academic audits.
Reports from the Office of Instructional Technology.

Student Competencies

Competency: THE ABILITY TO PLAN AND DO RESEARCH USING THE APPROPRIATE INFORMATION SYSTEMS.

Rationale: College graduates must be able to locate, retrieve, and use information, not only in their academic assignments, but in the workplace and in life. The community college experience must prepare students to use libraries and other information systems in order to complete research assignments, keep up to date in their fields, and find general information necessary to be an informed citizen.

Where Taught or Reinforced:

ENG 105.

All classes where papers are assigned.

Measurement:

One hundred percent of all students successfully completing ENG 105 will demonstrate the ability to utilize the library as a tool in order to do college-level research.

Measurement Tools:

Completion of library workbook.

Review of course outlines.

Feedback Loop:

Library report to academic dean regarding circulation statistics per discipline.

Library report on use of career collections, microfilm, CD reserver.

Transfer student surveys.

Academic audits.

PERM39-kk/PERM39-vv

Student Competencies

Competency: AN ABILITY TO OBSERVE, ANALYZE, AND APPRECIATE THE HUMAN EXPERIENCE THROUGH THE HUMANITIES AND SOCIAL SCIENCES.

Rationale: General education courses at LCCC reinforce what it means to be both human and humane. At LCCC, education provides a means of effective and fruitful interaction with the world. Course work in general education, and in the humanistic elements of academic programs of study, will enable the associate degree graduates to appreciate the richness of their own culture and other cultural traditions.

Where Taught or Reinforced:

The general education requirement.
Cocurricular activities.

Measurement:

One hundred percent of associate degree graduates will successfully complete courses in the humanities or social sciences.

Measurement Tools:

Review of student writing.
Review of student exams within humanities and social science courses for evidence of student growth and insights.
Review of course outlines in the humanities and social science.
Review of program requirements to determine student ability to apply academic information to career and life situations.

Feedback Loop:

Student satisfaction surveys.
Alumni surveys.
Academic audits.

Student Competencies

Competency: AN AWARENESS OF A PERSON'S ROLE IN THE NATURAL WORLD AND THE ABILITY TO REACT TO AND SHAPE THE ENVIRONMENT.

Rationale: LCCC believes that associate degree graduates must have an awareness of their role as citizens in a global community. They need to appreciate the importance of a fragile environment and the necessity of responsible and cooperative interdependence to ensure a hopeful future.

Where Taught or Reinforced:

Science courses (especially BIO 116).
Social sciences courses.
All club and extracurricular activities (including recycling program).
Modeling behavior on part of faculty and staff.
Allied health courses.
Selected readings in other courses.

Measurement:

One hundred percent of associate degree graduates will study issues involving the natural world either through laboratory science courses, social science courses, or other parts of the curriculum.

Measurement Tools:

Review of course outlines.
Student writing and journals.
Evidence of student voluntarism/community activism.
Club projects.

Feedback Loop:

Alumni surveys.
Student satisfaction surveys.
Academic audits.

PERM39-kk/PERM39-vv

Student Competencies

Competency: THE SKILLS NECESSARY TO MAKE ETHICAL DECISIONS IN CAREER AND PERSONAL RELATIONSHIPS.

Rationale: Throughout their lives students will confront many decisions that require ethical action. For this reason, it is imperative that students be educated in the ethical dimensions of their careers and lives. An awareness of basic societal values and their role in policy and decision making should be a component of both general education and the major area of study.

Where Taught or Reinforced:

Allied health courses governed by professional associations.
Business law courses.
Philosophy courses.
Selected business and accounting courses.
The cocurriculum (clubs, activities, advisement, and counseling).

Measurement:

One hundred percent of all associate degree graduates will explore ethical decision making either through the general education courses or within their programs of study.

Measurement Tools:

Role playing in course assignments.
Review of course outlines for ethical content.
Review of student writing/journals.
Case studies involving ethical dilemmas and decision making.
Faculty observations of student performance.
Bill of Student Rights and Responsibilities.

Feedback Loop:

Student satisfaction surveys.
Employer surveys.
Alumni surveys.
Advisory committee reports.

PERM39-kk/PERM39-vv

Student Competencies

Competency: THE OPPORTUNITY TO GAIN CONFIDENCE IN ONE'S ACADEMIC POTENTIAL AND ENHANCE ONE'S SELF-IMAGE.

Rationale: Many students come to LCCC as returning adults whose educations have been interrupted by employment, marriage, child rearing, military service, or relocation. Many others come with a history of frustration, intimidation, or marginal success in meeting their educational goals. A fundamental component of LCCC's educational philosophy is providing the environment and assistance to enable students to meet their goals. An important by-product of this process is a reinforcement of self-esteem and confidence that will extend to the graduate's career and personal life.

Where Taught or Reinforced:

All developmental and basic skills courses.
Counseling opportunities.
RAP.
LAS services.

Measurement:

A majority of associate degree graduates will experience a significant increase in self-confidence by successfully meeting their educational goals at LCCC.

Measurement Tools:

Student writing samples aimed at assessing self-confidence.
Review of developmental course outlines.

Feedback Loop:

Transfer survey.
Employer survey.
Student satisfaction survey.
Academic audits of developmental courses.
Counseling reports.

PERM39-kk/PERM39-vv

LCCC Worksheet on Student Competencies

Competency: AN ABILITY TO ASSESS REALISTICALLY ONE'S OWN SKILL LEVELS, ACADEMIC POTENTIAL, AND PERSONAL AND PROFESSIONAL STRENGTHS AND LIMITATIONS.

Rationale: The college believes that students should be able to assess their own potential and skills. Realistic goal setting, recognition of one's strengths and weaknesses, and career and educational planning should be part of the overall experience at LCCC as a means toward independent, life-long learning.

Where Taught or Reinforced:

RSS 104: The Master Student.
Career counseling and advisement sessions.
LAS services.
Discover computer network.
Career Collection Library.

Measurement:

One hundred percent of all associate degree graduates will have the opportunity to meet and work with LCCC staff to explore personal and career goals. Students will learn techniques of career and personal self-assessment.

Measurement Tools:

Review of student writing.
Usage of career collection, including Discover.
Surveys of LAS faculty and staff.
Use of appropriate interest inventories, value indicators, personality indicators, ability ratings, and other instruments.

Feedback Loop:

Transfer reports.
Employer surveys.
Student satisfaction surveys.

PERM39-kk/PERM39-vv

Recommendations

Recommendations

Based upon the work of the past eighteen months, the study group recommends to the President the following:

1. The study group recommends that one portion of the assessment of student outcomes be of a quantitative nature. We recommend using the Collegiate Assessment of Academic Proficiency (CAAP), a nationally normed standardized examination administered by the American Collegiate Testing company (ACT). This examination includes modules which may be used to measure Critical Thinking, Reading, Writing, Science Reasoning, and Mathematical proficiency of students at the points of entry and graduation.

We recommend that this exam be piloted at LCCC in 1992-93 in the areas of Allied Health and Education, where students are accustomed to various forms of ongoing assessment. It is hoped that the CAAP will be extended to significantly larger samples once the pilot is concluded and that strategies will be developed for its administration and tracking.

2. The study group recommends that additional attention be given to developing division-based assessment techniques. As suggested in Framework for Outcomes Assessment, the study group believes that a sufficient inventory of assessment techniques exist by which to make the qualitative assessment of students at LCCC an effective and successful institutional practice. However, the study group is recommending some specific qualitative measurements which are not currently in wide usage across the college. Examples of these include student portfolios, student journals, a faculty team approach to course and examination review, student interviews, and other measures which can provide useful and realistic monitoring of student growth and performance. It is important that over the next few years these practices be incorporated into the college's educational culture through academic program reviews, review and revision of course outlines, attention in divisional faculty meetings, and a greater collegewide appreciation for the importance of assessment and the principles of accountability.

3. As noted above, the study group recommends its own continuing existence. While the President's charge to the group has been addressed in this report, there remain many critical issues which this process has only begun to analyze in an exploratory way. Implementation and monitoring of the competencies, fine-tuning the measurement tools and statements, and serving as a steering committee for future assessment efforts, all fall within the purview of the committee's growing proficiency in this area.

4. The study group recommends that the college begin to review and revise its general education curriculum. The mission, goals, and objectives of the college have evolved over the past twenty-six years, but the general education "core" has remained essentially the same. The general education requirements at LCCC reflect an individualized approach to the core that may or may not be tied educationally to the learning outcomes that the college values. In addition, the study group understands that accrediting agencies and other quality control groups in the various professions require a rigorous, coherent general education component. With assessment as an issue at the forefront of the institution's agenda, this may be the most opportune time to examine what an LCCC education should mean.
5. The study group recommends publicizing assessment and making it an institutional priority. An overwhelming amount of evidence suggests that fiscal pressures, insistence from governing boards and the public, and the growing importance of the accountability movement all make assessment a key issue for the nineties and beyond. It is important now that the college begin allocating resources to support ongoing, systematic assessment. Funds will be needed for test administration, faculty development, institutional research, and curriculum review. None of this will work unless assessment is recognized campuswide as an educationally valid and yet nonthreatening tool for institutional effectiveness.
6. The study group recommends building assessment into the curriculum by amending the academic audit format and developing a checklist to be used by the Curriculum Committee as a means of incorporating assessment into new programs and courses. The committee further recommends that competencies and assessment be included in the 1992-93 division and cluster meeting agendas.

PERM39-vv
5/6/92

Appendices

Appendix I

Minutes of the study group meetings

LEHIGH COUNTY COMMUNITY COLLEGE
PRESIDENT'S STUDY GROUP ON STUDENT LEARNING COMPETENCIES
MINUTES

FEBRUARY 5, 1991

Dr. Barthlow presented his charge to the Study Group.

The following will serve as officers to the Study Group:

Tom Tate - Vice-Chairman

Kevin McGovern - Archivist

Ralph Kemmerer - Secretary

The following calendar was set for the remainder of the semester:

Feb. 19	Apr. 2
Mar. 5	Apr. 16
Mar. 19	May 7

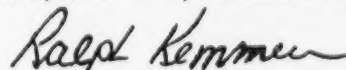
Meetings will be held at 3:30 PM in AD 151.

The following items were set for the next meeting agenda:

1. A discussion and review of some of the available literature. Mike McGovern will distribute copies of information from Middle States prior to next meeting.
2. A discussion of a preamble or statement of philosophy on outcomes assessment.
3. A look at the questionnaire currently sent to LCCC graduates.

The meeting was adjourned at 5:00 PM.

Respectfully submitted,



Ralph Kemmerer

cc: Dr. Barthlow
George Blyler
Mary Ann Buss
John Callahan
John Gauger
Joanne Gerkin
Ralph Kemmerer
Diane McDemus

Kevin McGovern
Michael McGovern
Robin Musselman
Evelyn Petrash
Ned Schillow
Tom Tate ✓
Ron Virden

RECEIVED

MAR 4 1991

Lehigh County Community College
VICE PRESIDENT

LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP ON STUDENT LEARNING COMPETENCIES

MINUTES

FEBRUARY 19, 1991

Dr. Michael McGovern announced two workshops pertaining to outcomes assessment. The first is a series of workshops sponsored by ACT with the closest one being held in Washington, D.C. The second is sponsored and held at Alverno College. Dr. McGovern indicated funds would be made available for one or two interested committee members to attend the meeting in Washington and perhaps for one to attend the meeting at Alverno.

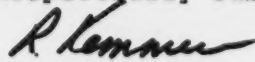
The balance of the meeting was devoted to a discussion/brainstorming session. Discussion centered around what outcomes assessment means to the various committee members, the types of outcomes that might be measured at LCCC and the ramifications that outcomes assessment would have on the curriculum.

Dr. Michael McGovern suggested two topics for the next meeting:

1. Focusing on some common goals for outcomes assessment at the college.
2. Methods to implement these goals into the curriculum.

The meeting was adjourned at 5:10 PM.

Respectfully submitted,


Ralph Kemmerer

cc: Dr. Robert Barthlow
George Blyler
Mary Ann Buss
John Callahan
John Gauger
Joanne Gerkin
Ralph Kemmerer
Diane McDemus
Dr. Kevin McGovern
Dr. Michael McGovern ✓
Dr. Robin Musselman
Evelyn Petrash
Ned Schillow
Tom Tate
Ron Virden

LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP ON STUDENT LEARNING COMPETENCIES
MINUTES
MARCH 5, 1991

Present: G. Blyler. M.A. Buss. J. Callahan. J. Gauger. J. Gerkin.
D. McDemus. R. McGovern. M. McGovern (chair). D. Petrash. N.
Shillow. 1. late. R. Virgen.

Absent: R. Kemmerer. R. Musselman

Dr. M. McGovern announced that the Asset program does have an assessment package and that the Developmental Education and Basic Skills Committee has been charged with making a recommendation by the end of the year.

John Callahan announced that the Video tape of Infusing Critical Thinking into the Community College Curriculum is in the library. He was charged with checking it out for the committee's next meeting. M. McGovern will arrange to have a VCR and television set up for viewing at that meeting.

Dr. M. McGovern mentioned that one of the candidates for the Dean of Business, Science and Technology is from Broome County Community College. The candidate had mentioned that Broome County took about two years to get started, but now has a committee that oversees assessment. They have instituted an institutionally-developed examination and have an orientation much like our Master Student course. The students are video taped discussing their career/life goals, they write a paragraph on their life goals, and take a one credit capstone course. As part of their exit assessment they are video taped again, and again write about their goals.

Discussion then followed about just what the college wished to assess in its students. The committee also started revising the "Statement of Purpose: Assessment Project" that M. McGovern had distributed at the last meeting. The point was raised that educational goals rather than career goals should be stressed--lest the students resist anything that was not obviously related to their chosen major.

The Committee stated that it wished our graduates to be humane, competent and inquisitive. Such graduates would have the following skills:

- Critical Thinking Skills
- Creative Thinking Skills
- Problem Solving Skills
- Quantitative Reasoning Skills
- Ability to See Relationships between Concepts
- Ability to Synthesize Information

Competence in Algebra
Ability to Retrieve, Evaluate and Apply Information
Love of Learning
Knowledge of How to Learn
Ability to Interpret the Printed Word
Communication Skills
Aesthetic Sensibility
Values and Ethics
Competence in Discipline

It was felt that employers were satisfied with the technical skills of our students, but wished them to have better problem solving and communication skills.

A tentative Goal Statement was drawn up as follows:

"Goal: Graduates of Lehigh County Community College should possess the following skills:

1. The ability to know how to access information,
2. retrieve it
3. interpret it
4. evaluate and analyze it
5. compare it with other relevant data
6. synthesize it
7. apply it
8. and effectively communicate it

in order to act in an informed, responsible and proficient manner in their roles as citizens and educated persons.

The graduates should also be competent in their major program of study."

The committee was charged with reviewing the list, reviewing the tentative goal statement, and inviting feedback from their clusters. They were asked to give a general sense of what the committee is seeking at the cluster meetings and to start thinking in terms of a model.

Recorded by Kevin J. McGovern

Kevin J. McGovern

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LEHIGH COUNTY COMMUNITY COLLEGE

President's Study Group on Student Learning Competencies

MAR 27 1991

Minutes

Lehigh County Community College
VICE PRESIDENT

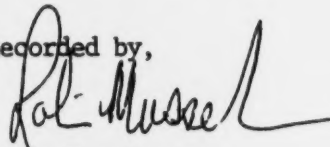
Present: George Blyler, Mary Ann Buss, Diane McDemus, Robin Musselman,
Evelyn Petrash, Ned Schillow, Tom Tate, Ron Virden

Absent: John Callahan, John Gauger, Joanne Gerkin, Ralph Kemmerer,
Kevin McGovern, Michael McGovern

Materials on outcomes from Medical Assisting Accrediting body and an article from an Accounting journal were distributed. The video, Critical Thinking Forum 1990 was viewed.

There were reports of comments from the clusters. It was suggested that we need to find ways to get involvement from all faculty and that perhaps this committee may be too idealistic: this may be an impossible task. There was also a feeling that people are skeptical and suspicious about the process of outcomes, that this may be viewed as an evaluation tool. Outcomes should be viewed as feedback to the faculty and not evaluation. It was discussed that this may be difficult to believe.

Recorded by,



Robin Musselman

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APR 16 1991

Lehigh County Community College
VICE PRESIDENT

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LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP ON STUDENT LEARNING COMPETENCIES

MINUTES

APRIL 2, 1991

PRESENT: George Blyler, Mary Ann Buss, John Callahan,
Diane McDemus, John Gauger, Joanne Gerkin,
Ralph Kemmerer, Kevin McGovern, Michael McGovern,
Robin Musselman, Evelyn Petrash, Ned Schillow,
Tom Tate

ABSENT: Ron Virden

The minutes from the past meeting were reviewed and based upon this a discussion was held on ways to gain faculty support. It was apparent from the reports from the divisions that many faculty did not understand the mission of the committee and viewed outcomes assessment as a threat.

It was suggested that outcomes assessment be placed on the agenda for the general faculty meeting at the end of the month. Mike McGovern said that this will be done.

Robin Musselman proposed having college-wide forums, bringing in faculty from other colleges who are in the process of outcomes assessment to share their experiences to help relieve faculty anxiety. Ned Schillow suggested using this as a topic for the Fall 91 academic convocation. Mike McGovern said he would suggest the idea to Dr. Barthlow.

A discussion was held on beginning to get some ideas on paper. Mike McGovern showed the following model and illustrated how it might be used:

<u>Outcomes</u>	<u>Criteria</u>	<u>Evaluation</u>
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It was decided to continue working with this model at the next meeting, working down the list of outcomes from the March meeting. Mike will have some blank forms of this model run-off for use at the next meeting.

The meeting was adjourned at 5:15 PM.

Recorded by

Ralph P. Kemmerer
Ralph Kemmerer

LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP ON LEARNING COMPETENCIES MINUTES

SEPTEMBER 3, 1991

Present: M. McGovern. Chair, G. Blyler, M. A. Buss, J. Callahan, R. Dickinson, J. Gauger, R. Kemmerer, D. McDemus, K. McGovern, R. Musselman, N. Schillow, T. Tate

Absent: J. Gerkin, E. Petrash (leave), R. Virden (sabbatical)

Schedule: Dr. McGovern announced that the committee would meet on the 1st and 3rd Tuesdays of each month at 3:30 in AD 140.

Recorder: It was decided that the duties of recorder would rotate alphabetically through the committee, starting with the next member. D. McDemus asked to be excused on grounds of health. K. McGovern agreed to serve as recorder for the meeting.

New Staff Introduction: Robyn Dickinson was introduced to the committee and her role in the college organization explained.

Charge from President: Dr. M. McGovern reviewed the president's charge to the committee and set a deadline of completing this charge by the end of the academic year.

Workshop Review: M.A. Buss and M. McGovern updated committee members on the conferences on assessment that they had attended since the last meeting. N. Schillow distributed notes from "Problem Solving Across the Curriculum."

Future Tasks: Dr. McGovern charged the committee members to keep the faculty in their divisions up to date on this committee's progress, to solicit from them the kinds of statistical assessment data available, and the kinds of statistical data that they would find useful. Dr. McGovern will distribute copies of the Mississippi State Technical Community College Statement of Values, and Bloom's Taxonomy of Educational Objectives for consideration at the next meeting. Robyn Dickinson's office will become the central repository for assessment materials for this committee.

Adjournment: The meeting was adjourned at 5:10 PM.

Respectfully submitted,

Kevin J. McGovern

cc: Dr. Robert Barthlow
George Blyler
Mary Anne Buss
John Callahan
Robyn Dickinson
John Gauger
Joanne Gerkin
Ralph Kemmerer
Diane McDemus
Dr. Kevin McGovern
Dr. Robyn Mussleman
Evelyn Petrash
Ned Schillow
Tom Tate
Ron Virden

President's Study Group on Student Competencies
Minutes--September 17, 1991

Present: George Blyler, Mary Anne Buss, John Callahan, William Davenport, Robyn Dickinson, John Gauger, Ralph Kemmerer, Diane McDemus, Michael McGovern (chair), Robin Musselman, Ned Schillow, Thomas Tate

The meeting was called to order by chairperson Michael McGovern at 3:30 P.M., with Ned Schillow being appointed as secretary pro tem. It was decided to delay approval of the minutes of September 3, 1991, until the next meeting, scheduled for 3:30 P.M. on October 1, 1991.

Dean William Davenport was presented as a new member of the committee.

Robyn Dickinson provided an *Inventory of Assessment Devices* which includes a listing of assessment tools already existing on campus. Included were three examinations, seven surveys, and twenty-two reports. During the discussion which ensued, the following points were raised:

- Numerous departmental studies have been conducted which involve assessment components.
- Middle States is interested in outcomes assessment tools which focus on the individual, departmental, and divisional levels as well as college-wide.
- Allied Health programs have numerous competency-based measurements of student performance already in place.
- The committee would benefit from looking closely at some of the data we already have.
- LCCC needs to clarify who has the responsibility for "closing the loop" when data is gathered. That is, who is responsible for disseminating the information and how is follow-through accomplished? The "feedback loop" is critical.
- The assessment devices listed are primarily academic in nature. We need to get a handle on outcomes related to non-teaching support and other services at the college, as well as the lack of support faculty might feel relative to their needs in providing for their classes.
- Existing surveys might need to be redesigned once this committee crystallizes the student competency goals.

The committee will continue to flesh out the list of assessment

devices at future meetings, and Robyn Dickinson will provide brief summaries describing each of the existing tools. In addition, the committee will be provided with copies of the most recent Employer Survey, Graduate Survey, Student Satisfaction Survey, and Transfer Survey as these seem to have the most impact in formulating our student competency plan.

Robyn Dickinson also provided the members with a summary sheet entitled *Observations*. This summary provides a meta-analysis of our most recent Middle States Study, with key phrases extracted from this document to help identify our sought-after outcomes.

A lively discussion ensued as to whether computer skills are in the same league as many of the other more enduring skills. In the attempt to resolve whether computers are a tool or the tool with which our students should have a working familiarity, the following goal statement was reached:

- ability to use and work with computers and related technology.

The second grouping on the *Observations* sheet included numerous items which broadly fit into the general theme of "the college experience" both in and out of class. These items concentrate on the benefits of a college education in fostering a commitment to general education and liberal arts without reference to a program of study, in dealing with abstract ideas rather than concrete skills, in addressing aesthetics and citizenship, and in developing values and an ethical perspective.

Formulating goal statements to address these areas proved difficult. Temporarily, we considered the following: "ability to recognize one's interdependence (or interrelationship) with others in society", "ability to recognize and appreciate the diversity in our society", and "student awareness of societal interrelationships and cultural diversity". Ultimately the following two outcomes statements were accepted:

- ability to think and act humanely and ethically in professional and personal relationships.
- student awareness of their role and responsibilities with their own society, the global community, and the physical environment.

The committee recognized that our outcomes must be measurable--whatever cannot be measured must be excised.

Recognizing the need business has for employees who work effectively on group projects, we added the goal:

- ability to work cooperatively with others.

Upon focusing on what is missing on the *Observations* form, it

was noted that communication skills should also include such receptive capabilities as listening and reading skills. Moreover, in line with the increasing need to communicate with persons from other cultural and ethnic backgrounds, the following goal was added to the list:

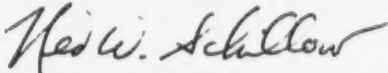
--ability to communicate in a foreign language.

It was recognized that this goal should be expanded to include an understanding of cultural considerations germane to the heritage associated with that language.

For the next meeting, the membership will continue to review the *Observations* sheet and consider the data found in the surveys supplied by the Research Office. In addition, input from the various clusters regarding other LCCC assessment devices will be presented.

The meeting adjourned at 5:07 P.M.

Respectfully submitted,



Ned W. Schillow
Secretary Pro Tem

Student Competencies Committee
Minutes, October 1, 1991

Present: George Blyler, Mary Anne Buss, John Callahan, William Davenport, John Gauger, Ralph Kemmerer, Diane McDemus, Kevin McGovern, Michael McGovern (chair), Ned Schillow, Thomas Tate

The meeting was called to order at 3:30 p.m. by chairman Mike McGovern. Kemmerer came in during the session as did Blyler and Schillow later on. The meeting began with the distribution of Summary of Survey Results that had been compiled by Robyn Dickinson. The committee continued to work with the sheet titled OBSERVATIONS, a continuation from the last meeting.

Chairman McGovern stated that one conclusion he believes will be made by this committee will be to recommend a revision of the curriculum, particularly the core curriculum.

The committee worked to define the skills and competencies we believe our graduates should have. Some of these statements of aims are working or "brain storming" statements and are being re-worked and polished. The statements we worked out follow.

"Competence in communications skills, both expressive (speaking and writing) and receptive (reading and listening)."

Ability to identify a research question, retrieve relevant data, apply the data in the problem solving. This statement was refined to produce the final version stated as: "Ability to use the appropriate information retrieval systems for the purpose of planning and completing a research project."

John Gauger pointed out that these techniques are taught in courses like English 105 which virtually every student takes but some delay taking the course until late in their program. Thus these students fail to benefit from this knowledge of doing research when they may need it most. The committee may need to recommend that English 105 be taken during the early semesters if not the first.

Continuing, we stated: "Ability to use quantitative (mathematical) skills." "An examination of human behavior through the social sciences."

The committee members from the math. area (Blyler and Schillow) suggested a concern expressed at certain institutions that students be competent in a math. that has an algebra base.

The meeting adjourned at 5:00 p.m. with the next scheduled meeting to be held on Tuesday October 15, 1991 at 3:30 p.m. in AD 140.

Respectfully Submitted,

Thomas K. Tate

Thomas K. Tate,
Acting Secretary

President's Study on Student Competencies
Minutes - October 15, 1991

Present: George Blyler, Mary Anne Buss, John Callahan, William Davenport, Robyn Dickinson, John Gauger, Ralph Kemmerer, Diane McDemus, Michael McGovern (chair), Ned Schillow, Margaret McMenamin, Virginia Mihalik, Thomas Tate

The meeting was called to order at 3:35 p.m. and Mary Anne Buss was appointed pro tem secretary

Tom Tate will be attending the Institute of Outcomes Assessment in Knoxville, Tennessee. He requested submission of questions that might be asked at the conference.

The minutes for the October 1 meeting were approved.

How do we measure identified competencies?

Robyn Dickinson handed out:

An Inventory of LCCC Assessment Devices

Type of Tests Given by LCCC

A Summary of Survey Results was reviewed.

During the discussion the following points were raised:

How long after graduation should students be surveyed?

How do we survey nonacademic areas - counseling, student activities?

How do we assess ethical behavior and academic honesty?

How do we measure social behavior?

Suggestions - activities on campus, networking, membership in profession organizations.

There was discussion of Coherence and Purpose of General Education at Broome Community College.

Are we doing anything to combat unethical behavior?

A request was made to review the English 105 outline.

This is the only universal course at LCCC.

Robyn Dickinson also handed out:

Measurement of Student Competencies

These were ideas put together by Robyn and Michael McGovern.

During additional discussion the following points were raised:

Do we have the resources for teaching computer skills in all areas?

A foreign language requirement would be difficult to include in many programs and not exceed sixty credits.

How do we teach and assess the ability to work with others?

The agenda for the next meeting will include:

Reexamination of competencies and a review of Bloom's Taxonomy.

The meeting adjourned at 5:10 p.m.

Respectfully submitted,

Mary Anne Buss

Mary Anne Buss
Secretary Pro Tem

President's Study Group on Student Competencies
Minutes - November 12, 1991

Present: George Blyler, Mary Anne Buss, John Callahan, William Davenport, Robyn Dickinson, Ralph Kemmerer, Kevin McGovern, Michael McGovern (chair), Ned Schillow, Margaret McMenamin, Virginia Mihalik, Thomas Tate

The meeting was called to order at 3:30 p.m. and Robyn Dickinson was appointed pro tem secretary.

Two handouts were presented to the committee members, "Coherence and Purpose General Education at Broome Community College" and LCCC Course Outlines for English 105 and 106. This information had been requested by the committee members at the prior meeting and was distributed by Robyn Dickinson.

Tom Tate presented a report on the Institute of Outcomes Assessment which he attended in Knoxville, Tennessee. His presentation included a handout, "Student Learning Competencies Committee Member," in which he summarized answers to the questions which the committee had submitted to him at the prior meeting. The literature which he brought back from the conference has been placed in the Office of Institutional Research.

The discussion which followed Tom's presentation included the following points:

Tom felt that we are "in step" with the other institutions attending the conference in terms of our progress toward assessment. He stated that other schools have found that in examining their existing measurement tools too often they are a measure of content, and not the measures of student understanding (a process) that are needed for outcomes assessment. He also stated that there was an emphasis on the use of portfolios as a form of measurement and on self-assessment by the student.

The issue was then raised of who would evaluate these portfolios due to the imbalance in the numbers of students enrolled in our programs. It was suggested that sampling techniques be used for both quantitative assessment and the evaluation of portfolios. It was also noted that portfolio assessment should remain close to the faculty who are teaching that subject matter, perhaps by cycling the portfolio evaluation by departments. It was also suggested that the portfolio could become part of a 1 credit capstone experience within the students program of study.

John Callahan presented an example "Writing Competency Portfolio" from Eckard College which is evaluated at the end of the sophomore year.

Mike McGovern reported on the PA Conference of Academic Deans held at LaRoche College. This conference was also attended by Kevin McGovern. The topic of the conference was assessment. A speaker at the conference emphasized that assessment is part of accreditation and that there must be "congruence" between student outcomes (competencies) and the stated goals of an institution (mission). Mike also shared a letter from the Commission on Higher Education which included a survey of assessment activities at LCCC.

Robyn Dickinson presented "Observations on Transfer Experience," "Observations for Career Competencies," and "Observations on General Competencies." These are part of a continuing effort to identify our existing institutional goals. The discussion which followed Robyn's presentation included the following points:

A discussion on "confidence" - what is it? can it only be measured from the students perceptions? can students realistically self-assess? A tentative student competency was defined as:

"to gain confidence in their academic potential and enhance their self-image"

This quality could be assessed within a portfolio. Bill Davenport suggested that self-awareness was the issue. A second tentative student competency was defined as:

"be able to realistically assess one's own skills levels, academic potential, and personal and professional strengths and limitations"

Is this a value-added statement? Should students at the age of 20 assess their weaknesses? Does this create limitations? We can measure a goal statement written by the student when they begin and end a program to evaluate grammar, writing, and their self-assessment abilities.

A closing discussion included the following points:

Mary Anne suggested "time management" as a possible competency. It was agreed that this is included in the existing "ability to work with others" competency.

John Callahan suggested changing "competence in reading" by adding "within a discourse community" for better measurement.

Mike raised the issue of the use of the terminology "quantitative reasoning" vs. "mathematics" within the competencies which had been discussed at a faculty meeting. It was suggested that there should be some means to fulfill a math competency without taking a math course for example, passing the assessment test.

The agenda for the next meeting will include a critical test review of the ETS Academic Profile. The members were also asked to complete the LCCC Worksheet on Student Competencies for discussion at the next meeting. The meeting was adjourned at 5:15 p.m.

Respectfully submitted,

Robyn L Dickinson

Robyn L Dickinson
Secretary Pro Tem

LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP
ON
STUDENT LEARNING COMPETENCIES

Minutes
November 26, 1991

Present: M. McGovern (chair), Blyler, Callahan, Dickinson, Gauger,
K. McGovern, McMenamin, Musselman, Tate

John Gauger graciously volunteered to serve as pro tem secretary at the next meeting.

INVENTORY ON INSTRUCTIONAL TECHNOLOGY

The group reviewed an inventory of existing hardware and software on campus, as compiled by Beth Leppig. The inventory also included a list of programs currently owning course-related software, and a review of dedicated space across campus for computer labs.

ETS ACADEMIC PROFILE

The group reviewed the Academic Profile for possible use as a quantitative assessment instrument to demonstrate growth during the LCCC experience. Questions focused on the relative difficulty of the test, logistical problems with administering it effectively, and its use at a two-year institution. The group will review other possible instruments over the next few months.

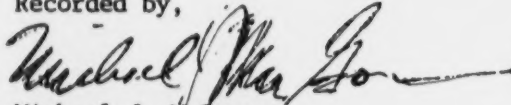
M. McGovern reemphasized the need for a quantitative tool as one part of a multiple assesment package.

CRITICAL REVIEW OF PROPOSED COMPETENCIES

The group began to critically review the competencies proposed to date. Efforts focused on providing effective measurement techniques and feedback mechanisms for each competency. This review will be continued at the next meeting.

The next meeting will be on December 10 at 3:45 p.m. in the President's Conference Room.

Recorded by,


Michael J. McGovern

MJM:dn

LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP ON STUDENT LEARNING COMPETENCIES

Minutes
December 10, 1991

Present: M. McGovern (chair), Blyler, Schillow, Dickinson, Gauger, Mihalik, Kemmerer, K. McGovern, Tate, McDemus, Buss, Davenport, Musselman

The minutes of November 26, 1991, should be corrected to show that Ned Schillow was present.

ETS ACADEMIC PROFILE

Robyn Dickinson reviewed her findings of the use of the ETS "Academic Profile" Test" as used by other colleges. Results are quite mixed in a variety of uses.

She then circulated literature on the ACT "Asset" test "collegiate assessment of academic proficiency". She will give us more information on this test at a later meeting.

COMMITTEE SCHEDULE FOR SPRING

The next meeting of this committee will be on January 21, 1991, at 3:30 in AD 140. We should reserve the first and third Tuesdays through May for this work.

CRITICAL REVIEW OF COMPETENCIES

The committee proceeded to review the competencies that had been proposed to date. Efforts focused on providing effective measurement techniques and feedback mechanisms for each competency. Particular emphasis at this time was the review of the second, third, and the fourth competencies. We will continue this review at our next meeting in January. Tom Tate stated that he believed some courses are more introductory and informational, not as easy to teach critical thinking. This comment will be discussed further. The competencies were reviewed, rewritten, and critiqued.

Recorded by,

John H. Gauger
John H. Gauger

JG:dp
C-91

LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP ON STUDENT LEARNING COMPETENCIES

Minutes
January 21, 1992

Present: K. McGovern (chair), Blyler, Davenport, Dickinson,
Gauger, Kemmerer, McDemus, McMenamin, Mihalik,
Musselman, Schillow, Tate

The minutes of December 10, 1991 were accepted.

COMMITTEE TIMETABLE

February 4, 1992 - Finish final four competencies

February 18, 1992 - Review and refine

March 3, 1992 - First draft of report

March 17, 1992 - Polish report

April 7, 1992 - Final report

CRITICAL REVIEW OF COMPETENCIES

The committee proceeded to review/revise the competencies that had been proposed to date. The committee reviewed competencies four through eight. The competencies were reviewed, critiqued and rewritten.

Recorded by,



William S. Davenport

LEHIGH COUNTY COMMUNITY COLLEGE

President's Study Group on Student Learning Competencies

Minutes

February 4, 1992

Present: M. McGovern (chair), Blyler, Davenport, Dickinson, Gauger, Kemmerer, McDemus, K. McGovern, McMenamin, Mihalik, Musselman, Schillow, Tate

COMMITTEE MEMBER CONSIDERATIONS

Mary Anne Buss' former position on this committee will not be filled this academic year.

John Callahan cannot attend Tuesday afternoon committee meetings this semester. Since he wants to be current with our proceedings, he could perhaps sit in the planning sessions which Mike McGovern and Robin Dickinson have about once a week.

CHANGE IN A MEETING DATE

Instead of our meeting on Tuesday, March 3 at 3:30 pm, we shall meet on Friday, March 6 from 8:00 to 9:30 am.

ADDITION TO FEEDBACK LOOP FOR A COMPETENCY

It was suggested that "Survey the faculty" be added to the feedback loop under the competency "The ability to work with others". Perhaps "Surveying the faculty" should be added to other feedback loops.

CHANGE OF WORDING ON STATEMENT OF COMPETENCIES

Changes in wording were made as follows.

From:

8. An ability to think and act humanely and ethically in professional and personal relationships.

To:

8. An ability to make sound ethical decisions in career and personal relationships.

From:

9. Competence in communication skills, both expressive (writing/speaking) and receptive (reading/listening).

To:

9. An ability to communicate effectively with expressive skills (writing and speaking) and receptive skills (reading and listening).

From:

11. Ability to utilize appropriate information systems for the purpose of planning and completing a research paper.

To:

11. Ability to utilize appropriate information systems for the purpose of planning and completing research.

DAY/EVENING COMPUTER LAB UTILIZATION

The computer lab is filled during the four evenings. Day versus evening availability of the computer lab should be examined.

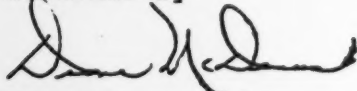
FURTHER LOOK AT "RESEARCH" IN THE COMPETENCY LISTING

Next time we shall examine the following possibilities. Should we include another competency, such as "Ability to do research"? Or should we rewrite competency #11 as "The ability to plan and do research using the appropriate information systems"?

THE PACKAGE OF COMPETENCIES

It was requested that at the next meeting on Tuesday, February 18 we'd be provided with the updates on all the competencies as a package.

Recorded by



Secretary pro tem

2/4/92

LEHIGH COUNTY COMMUNITY COLLEGE

PRESIDENT'S STUDY GROUP ON STUDENT LEARNING COMPETENCIES

Minutes
February 18, 1992

Present: M. McGovern (chair), G. Blyler, W. Davenport, R. Dickinson, J. Gauger, R. Kemmerer, D. McDemus, K. McGovern, G. Mihalik, N. Schillow, T. Tate, and R. Virden.

The minutes of the meeting of February 4, 1992, were accepted as distributed. Ginny Mihalik was appointed secretary pro tem.

REVIEW OF ACT CAAP TEST

Robyn Dickinson distributed samples of the CAAP instrument for review. The committee had a number of concerns about the instrument. How will we implement the pretest and posttest? How can we be assured of an accurate measurement based on the sample being tested? Concerns were expressed over the difficulty of some of the tests, particularly the mathematics and science tests; some programs do not have a math or science component. Members commented on the negative impact that this might have on students. A new student might feel overwhelmed and decide that he/she is unprepared for a college experience. A graduating student might question his/her academic experience if they are given a test outside of their academic discipline (for example, the case of a Travel and Tourism student who takes the Science test or a Physical Therapist Assistant student who takes the Mathematics test.)

The committee examined the norms provided by ACT. Further concerns were expressed. Will this instrument measure the outcomes being sought? Does this instrument actually measure the "value added" component that we need?

The committee felt that we could not make any decisions about whether to adopt this system of measurement until we had a chance to have our questions answered. Dr. M. McGovern will invite Mr. Dan Schaffer, a representative from ACT, to a later meeting to explore these issues.

REVIEW OF RATIONALE STATEMENTS FOR COMPETENCIES

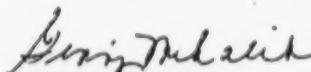
The committee should be prepared to examine the final two competencies at the next meeting. We will return to the question posed at the last meeting: Should we include another competency, such as "Ability to do research" or should we rewrite competency #11 as "The ability to plan and do research using the appropriate information systems"?

Dr. McGovern will be distributing updated materials to all committee members which will include rationale statements for each competency and additional feedback loop items.

NOTE: The next meeting of the President's Study Group on Student Learning Competencies will be on Friday, March 6, at 8:00 a.m. in the President's Conference Room. There will not be a meeting on March 3, as previously scheduled.

The meeting adjourned at 5:05 p.m.

Respectfully submitted,


Ginny Mihalik
Secretary Pro Tem

President's Study Group on Student Competencies
Minutes--March 6, 1992

Present: George Blyler, John Callahan, William Davenport,
Robyn Dickinson, John Gauger, Ralph Kemmerer,
Kevin McGovern, Michael McGovern (chair),
Maggie McMenamin, Ned Schillow, Thomas Tate

The meeting was called to order by chairperson Michael McGovern at 8:00 A.M., with Ned Schillow being appointed as secretary pro tem.

David Lutz, of CAAP testing, has been contacted about concerns and questions regarding the CAAP assessment testing program: On Monday, March 9, 1992, Dr. Lutz will be meeting with Bill Davenport, Robyn Dickinson, Mike McGovern and Ron Virden in Philadelphia to discuss the CAAP package. In addition to questions summarized in the February 18, 1992, minutes of this committee, the following points were raised:

- What other colleges have already used the CAAP Assessment test? Can a list of schools be secured so they can be contacted with regard to mechanical details for administering this test?
- Is the science test really aimed at testing scientific knowledge? Is it intended instead to be more of a critical thinking test? Does it really test scientific reasoning or is it a graphs and charts test?
- What is the distinction between the critical thinking test and the reading test? Their similarity suggests that they are designed to assess the same outcomes.
- The range of questions on the mathematics test is quite broad. How meaningful are the nationwide norms for this test as administered to sophomores?
- ✶ • Do sufficient data exist for comprehensive community colleges to provide meaningful normed results of students at institutions comparable to LCCC?
- ✶ • Can we form an assessment testing package that pieces together different components of various packages (such as ASSET testing)?
- This test is rather new, so how useful is their data to us? Knowing that their current data shows a mean score improvement of only one point between incoming freshmen and second semester sophomores, what is the import of such a minor increase in addressing the value added issue?

A report will be given to the committee at our next meeting.

Mike McGovern provided the committee with updated copies of the thirteen competencies, including newly written rationale statements. The committee spent most of the meeting critiquing these statements, with Robyn Dickinson recording changes. Work will continue at the next meeting to further refine the competencies, rationale statements, methods of measurement, feedback tools, etc.

For the purpose of discussion, Mike McGovern suggested the following prioritization of the competencies, which will be discussed next time:

- 1) Program of study
 - 2) Communication skills ③
 - 3) Recognizing relationships between disciplines ⑤ .
 - 4) Working with others ④
 - 5) Thinking critically ②
 - 6) Quantitative reasoning
 - 7) Computer and technology usage
 - 8) Research abilities
 - 9) The human experience through social science and humanities
 - 10) The student's role in the physical world
 - 11) Ethics
 - 12) Academic self-confidence; enhance self-image
 - 13) Self-assessment
- move up* (with arrows pointing from item 10 to 9 and from item 9 to 8)

The date of and time of the next meeting was undecided, but either will be at 3:30 P.M. on Tuesday, March 17, or at 8:00 A.M. on Friday, March 20.

The meeting adjourned at 9:38 A.M.

Respectfully submitted,



Ned W. Schillow
Secretary Pro Tem

President's Study Group on Student Competencies
Minutes
April 7, 1992

Present: G. Blyler, R. Dickinson, D. McDemus, K. McGovern,
M. McGovern, G. Mihalik, N. Schillow, T. Tate, R. Virden

The meeting was called to order at 3:35 p.m. by Chairman Mike McGovern. The meeting style was more workshop than parliamentary; thus there were no motions made requiring seconding and voting.

Robyn Dickinson and Ned Schillow reported to the committee on a conference they attended which presented an overview of Montclair and Iona Colleges concerning student outcomes. There the various departments determine the outcomes. This has as much to do with politics as with anything else they reported. It seems there is more faculty support if departments can tailor the outcomes assessment measurement tools. There was discussion among our committee members on this point. It was generally believed that our committee should take a strong stand behind the competencies and outcomes we are presenting. Both Robyn and Ned believe that we at LCCC are close to what other schools are doing.

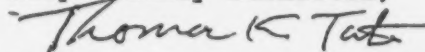
The committee then looked at the Draft Report to the President. We reviewed all the components of the draft. We decided that we may need a piece to bridge what we suggest and the day to day implementation of these competencies.

We then looked at specific competencies. Diane McDemus suggested changing the item "Courses Taught" to "Where Taught" or "Where Reinforced." Also it was suggested the draft include table of contents listing all the surveys mentioned in the Feedback Loop.

The committee members were instructed to read the draft looking for errors and omissions and note any suggested changes.

The next meeting will be Friday April 24th at 8:00 a.m. in the President's Conference room. The meeting adjourned by common consent at 5:15 p.m.

Respectfully submitted,



Thomas K. Tate, Acting Secretary

Appendix II

List of Conferences and Participants

1. AAHE National Conference on Assessment:
Dr. Michael McGovern and Dr. Kevin McGovern, June 1991
2. "Implementing Institutional Effectiveness and
Student Learning Outcomes on Your Campus":
Professor Mary Ann Buss, Summer 1991
3. North East Association for Institutional Research:
Robyn Dickinson, November 1991
4. The University of Tennessee Conference on Assessment:
Professor Tom Tate, November 1991
5. Montclair State University Assessment Conference:
Robyn Dickinson, Professor John Callahan, and
Professor Ned Schillow, March 1992
6. Harrisburg (ACT): Dr. Michael McGovern,
Dr. Kevin McGovern, Professor John Callahan

Appendix III

Resources:

Inventory of Existing LCCC Assessment Devices

Summary of Survey Results

Instructional Technology Across the Curriculum

Critical Test Review of the CAAP

INVENTORY OF LCCC ASSESSMENT DEVICES

Examination:

Assessment and Placement Exam
Certification Exams
State Board Exams

Surveys:

City Site Survey: Issued to gain more information about what types of people are enrolled in courses at LCCC's City Site in Allentown. (1988 and 1990)

Employer Survey: "Developed to obtain an assessment of the job performance of 1988 graduates and thus learn how well LCCC's programs are preparing students for employment." (Classes of 1986, 1987, and 1988)

Employer Training and Development Survey: "The survey addresses the competencies and skills that employers require of their work force, enabling LCCC and ASTD to plan for future training needs." (Corporate Relations and Training, 1991)

Entering Student Survey: (currently developing)

Former Student Survey: Issued to students who did not return to LCCC in spring 1987 in an attempt to assess the reasons for a student's decision not to return.

Graduate Survey: "Purpose of the study is to allow alumni (2-3 years after graduation) to evaluate LCCC's role in helping them to attain their educational and career goals. Responses would provide an assessment of LCCC's impact on its students and would aid the college in understanding how its graduates are affected by their LCCC experience." (Classes of 1985, 1986, 1987, 1988)

Student Satisfaction Survey: Administered at the time of application for graduation to measure students' satisfaction with the academic programs and support services supplied by the college. (Trial run on Class of 1991)

Reports:

Academic Audits:

Academic Progression by Ethnic Origin: Credits attempted, credits completed, and GPA by ethnic origin.

Admissions Report: Semester report on number of applications received, accepted, and registered by program of study.

Advisement Center Utilization: Statistics on the number of students served in the Advisement Center. Includes information on type of student, student concern, and follow-up when necessary.

Annual Program Analysis:

Basic - Developmental Tracking Study: "Undertaken in order to assess the effectiveness of the college's basic/developmental program." (Fall 1985 and 1986 new students) (Similar projects were undertaken in the early 1980's)

Comparison of Assessment Test Scores Report: Compares scores received on the Language Usage Test, the Writing Sample Test, the Reading Test, the Numerical Skills Test, and the Algebra Test by students enrolling at LCCC for the first time. Years of comparison have been 1987-1990, 1987 and 1988, and 1985/86-1988/89.

Daily Enrollment Reports: Enrollment reports prior to the start of each semester; includes comparison with previous year and previous year third week statistics.

Enrollment Comparison by Program: Enrollment statistics by program of study.

Grade Analysis Report: Details the distribution of grades, by number and percentage, assigned by each department. Also gives an average departmental grade. (Fall Semester 1990)

Graduate Profile: Gives basic information (degrees awarded, program of study, demographics) for a graduating class. (Classes of 1986, 1987, 1988, 1989, and 1990)

Historical Grade Distribution Report: Report on grades by department and course.

History of Enrollments (Full-Time and Part-Time): Historical data on enrollments of full- and part-time students.

International Student Report: Demographic data on international students attending LCCC.

Master Student (Matched-Pair Study): A matched-pair study to determine impact of completing Master Study class.

Placement Report: Annual report on graduates in reference to job placement; utilizes placement survey.

Recent High School Graduate Study: A report done each fall for each sponsoring high school. Includes data on three years most recent high school graduates attending LCCC - program of study, credits enrolled, developmental and remedial courses required, credits attempted, credits completed. Retention statistics and average GPA.

Recent Vocational Technical School Graduate Study: A report done each fall for the LCVTS and CCVTS. Includes data on three years most

recent graduates attending LCCC - program study, credits enrolled, developmental and remedial courses required, credits attempted, credits completed. Retention statistics and average GPA.

Retention by Ethnic Origin: Retention statistics for all LCCC students by ethnic origin.

Room Utilization Report: Statistics on utilization of rooms on campus.

Student Profiles (New Admitted, Full-Time and Part-Time): Report done each semester on third week statistics, including number of students, status, gender, ethnic origin, program enrollment, age educational goals, previous college work, and year of graduation from high school. Reports are done on Newly Admitted Students, Full-Time and Part-Time.

Transfer Experiences Report: The outcomes of students who transferred in 1985 or 1986 were tracked by obtaining information from their school of transfer. The purpose was to help LCCC assess its effectiveness in providing transfer education. (A similar Transfer Outcomes Study was also conducted using data collected on students transferring in the 1983-84 academic year.)

Within Semester Withdrawal Information: Report on the statistics for student withdrawing within a semester.

Yearly Graduates by Program: List of graduates by program of study.

Office of Institutional Research
PERM39-k
10/3/91

Summary of Survey Results

The following is a summary of the most recent survey results which pertain to our charge of addressing student competencies. The set of complete survey results will be available from the Office of Institutional Research.

1. Survey of Employers of 1988 LCCC Graduates

The following are the responses of 127 employers or 43.2% of those surveyed.

Employers were asked to rate the preparation received by the graduates in a number of technical skills areas. Technical skills refers to the presence of specialized skills and practical knowledge related to the individual's job. The following table addresses the technical skills of 1988 graduates as evaluated by their employers. Percentages represent the employers who chose that response.

	Above Average	Average	Below Average	Not Applicable	No Response
Job-related theoretical knowledge	41.7%	40.9%	3.9%	11.8%	1.6%
Ability to operate job-related equipment	44.9%	37.8%	2.4%	13.4%	1.6%
Math skills	26.8%	50.4%	2.4%	18.9%	1.6%
Oral communication skills	39.4%	47.2%	8.7%	3.1%	1.6%
Computer skills	22.8%	35.4%	4.7%	35.4%	1.6%
Written communication skills	29.9%	52.8%	7.9%	7.9%	1.6%
Problem-solving ability	38.6%	44.1%	9.4%	6.3%	1.6%
Overall quality of work	49.6%	43.3%	3.9%	1.6%	1.6%
Quantity of work accomplished	49.6%	40.9%	4.7%	3.1%	1.6%

Almost half the employers (49.6%) reported that the graduates are above average in overall quality of work and quantity of work accomplished. On the other hand, the two technical skills areas in which LCCC graduates are weakest are oral communication skills and problem-solving ability.

The following table addresses the personal skills of 1988 graduates, as evaluated by their employers. Percentages represent the employers who chose that response.

	Above Average	Average	Below Average	Not Applicable	No Response
Attendance	66.9%	27.6%	2.4%	1.6%	1.6%
Punctuality	63.8%	28.3%	4.7%	1.6%	1.6%
Accepting responsibility	61.4%	33.9%	2.4%	.8%	1.6%
Initiative	55.9%	36.2%	5.5%	.8%	1.6%
Ability to follow instructions	59.8%	32.3%	5.5%	.8%	1.6%
Willingness to learn	68.5%	25.2%	2.4%	2.4%	1.6%
Ability to work without supervision	56.7%	32.3%	7.1%	2.4%	1.6%
Work attitude	56.7%	37.0%	3.1%	1.6%	1.6%
Ability to handle pressure	32.3%	53.5%	10.2%	1.6%	2.4%
Cooperation with coworkers	52.0%	40.9%	3.1%	1.6%	2.4%
Compliance with policies/procedures	48.0%	47.2%	1.6%	1.6%	1.6%
Personal appearance	57.5%	37.0%	2.4%	1.6%	1.6%

More than half the employers reported that the LCCC graduates are above average in every personal skill except ability to handle pressure and compliance with policies/procedures. The personal skill which received an above-average evaluation most frequently is willingness to learn.

The two personal skills areas in which LCCC graduates are weakest are ability to work without supervision and ability to handle pressure.

2. Employer Training and Development Survey (1991)

The following are responses from 145 local employers or 18% of the 800 surveyed:

What areas of training do you plan to provide for your employees within the next two years? (check all that apply)

Executive Development	31.0%
Management/Supervisory Development	70.3%
Sales and Marketing	43.4%
Customer Service	55.2%
Quality Control	55.2%
Technical	51.7%
Business/Office	26.9%
Foreign Languages	3.4%
Computer Literacy and Software Applications	53.1%
Basic Skills (reading, writing, math)	10.3%
Other	17.2%

What competencies need to be addressed by training in your company?

"people skills," "personal and management development," "management/supervisory skills," "interpersonal communications," "communication within and between work groups," "interpersonal skills," "team building," "team-oriented problem solving," "human relations," "diversity in the workplace," "customer service," "personal development skills," "cultural diversity," "health and safety," "the environment"

"product knowledge," "technical training," "technical skills," "industry changes," "cross training," "we are constantly addressing change"

"time management," "delegating," "budget management," "management development," "work ethic," "planning skills," "problem analysis and decision making," "responsibility," "problem solving," "strategic planning," "project management," "training the employees to think on Bloom's higher levels and following through with their thoughts," "managing change," "quality assessment," "discipline"

"basic skills," "writing," "reading, spelling, writing, math, and English," "basic office skills," "professionalism," "language," "better business writing"

"technical training for manufacturing engineering, i.e., CAD/CAM, CIM, CNC," "computer literacy," "computer training," "computer skills," "computer processes," "data entry or word processing," "learn new software packages," "being informed of latest hardware developments," "computer basics for lap tops"

3. Former Student Survey (1987)

This survey was distributed to students who "failed to return to LCCC in spring 1987." The following are responses of the 177 individuals (24%) from the total 745 surveys which were mailed.

At the time of their enrollment, over 63% of the respondents had indicated their intention to pursue an associate degree. Main reasons for attending, indicated at the time of enrollment, were to obtain a job (35%) and to improve present job skills (27%). However, it is interesting to note that on the former student survey, 32% of the former students indicated that their primary reason for attending LCCC was to earn credits for transfer to a four-year college.

Plan of Study Indicated at Time of Enrollment

	<u>Number</u>	<u>Percent</u>
Optional	21	11.86%
Associate degree planned	113	63.84%
Certificate planned	24	13.55%
Two semesters planned	27	15.25%

Plan of Study Indicated at Time of Enrollment

	<u>Number</u>	<u>Percent</u>
Job skill improvement	48	27.11%
Obtain job	62	35.02%
Transfer	35	19.77%
Personal Interest	21	11.86%
Other	3	1.69%

(Survey) My primary reason for attending LCCC was to:

Improve my existing job skills	24%
Prepare for a job to be obtained	20%
Retrain for another career	20%
Earn credits for transfer to a four-year college	32%
Personal Interest	21%
Other	3%

(Note: Some students checked more than one response.)

Primary reasons indicated for not returning:

Schedule conflict	17%
Family responsibilities	10%
Financial reasons	7%
Attend another college	6%
Unsure of academic/career goal	6%
Personal problems	4%
Medical	4%
Moving/moved out of area	3%
Had low grades, was on probation, was suspended	2%
Transportation difficulties	1%
Classes did not meet expectations	1%
Other	1%
No response	38%

The most commonly cited academic problem experienced by respondents was a lack of time to study because of working too many hours.

(Survey) I experienced the following problems: (check all that apply)

Poor study skills	8%
Staying motivated	17%
Boredom in class	10%
Keeping up with the class	7%
Not being able to get extra help with my studies	4%
Was not prepared for the level of instruction	4%
Not enough time to study because of working too many hours	31%
No response	19%

4. Graduate Survey - Class of 1988

This survey was distributed to the alumni from the graduating class of 1988 in January 1991, approximately 2½ years after graduating from LCCC. The following are the responses of 205 alumni, or 54% of the 419 graduates.

39% of the alumni transferred to another institution,

they reported their grades at the second school as:

55.0%	"above the same"
26.3%	"higher"
18.8%	"lower"

they reported LCCC's preparation overall for further education as:

18.8%	"exceptionally well"
33.8%	"more than adequately"
41.3%	"adequately"
5.0%	"less than adequately"
1.3%	"poorly"

they reported LCCC's preparation academically for further education as:

25.0%	"exceptionally well"
31.3%	"more than adequately"
36.3%	"adequately"
6.3%	"less than adequately"
1.3%	"poorly"

they reported LCCC's preparation socially for further education as:

11.3%	"exceptionally well"
32.5%	"more than adequately"
42.5%	"adequately"
11.3%	"less than adequately"
2.5%	"poorly"

82% of the alumni were employed,

they reported LCCC's preparation for their current occupations as:

21.9%	"extremely well"
39.1%	"more than adequately"
34.3%	"adequately"
4.1%	"less than adequately"
1.5%	"poorly"

they reported the relationship of their current occupation to their studies at LCCC as:

59.3%	"closely related"
30.5%	"somewhat related"
10.2%	"not related"

5. Student Satisfaction Survey (January 1991 Graduates)

The following are the responses of 80 graduates which constitute 74% of all those who graduated in January 1991.

In their program of study:

opportunity for writing skills development

13.7%	"very satisfied"
50.0%	"satisfied"
23.8%	"neutral"
—	"dissatisfied"
1.3%	"very dissatisfied"
11.3%	"don't know/does not apply"

opportunity for oral communications skills development

16.3%	"very satisfied"
48.8%	"satisfied"
21.3%	"neutral"
—	"dissatisfied"
1.3%	"very dissatisfied"
12.5%	"don't know/does not apply"

opportunity for small group projects

7.5%	"very satisfied"
32.5%	"satisfied"
37.5%	"neutral"
5.0%	"dissatisfied"
2.5%	"very dissatisfied"
15.0%	"don't know/does not apply"

Outside their program of study:

opportunity to develop writing skills

17.5%	"very satisfied"
51.3%	"satisfied"
17.5%	"neutral"
-	"dissatisfied"
1.3%	"very dissatisfied"
10.0%	"don't know/does not apply"

opportunity to develop oral communication skills

20.0%	"very satisfied"
46.3%	"satisfied"
15.0%	"neutral"
1.3%	"dissatisfied"
1.3%	"very dissatisfied"
13.7%	"don't know/does not apply"

opportunity to work on group projects

8.8%	"very satisfied"
41.3%	"satisfied"
25.0%	"neutral"
1.3%	"dissatisfied"
2.5%	"very dissatisfied"
20.0%	"don't know/does not apply"

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9/27/91

Instructional Technology Across the Curriculum

This report will argue in favor of LCCC actively pursuing the competency of the ability to use and work with computers and related technology. There are three parts to this report: the whys, the whens, and the hows. Without going into detail now, it could also be argued that while focusing on this competency that six of the eleven other competencies will be exercised.

Those six abilities are: to recognize relationships between academic disciplines, to think critically and creatively when confronting new situations, to work with others, to utilize appropriate information systems for the purpose of planning and completing a research paper, to use quantitative reasoning, and to possess communications skills, both expressive and receptive.

WHY

When considering what competencies are essential for our graduates, three of the indicators that will help LCCC decide those competencies are:

1. What schools do are students come from
2. Where do our graduates go: employment and four year colleges
3. Daily lifestyle for the coming decades

Our students are coming from schools where computers and technology are currently being used and will continue to be used on a more wide spread basis. Consequently, students arrive at LCCC with certain technological expectations. Furthermore, four year colleges are also expecting a skilled level of computer literacy at the junior year ranking. Businesses in the Lehigh Valley as well as the nation must use computers in order to compete and survive in this swiftly changing economy. As an indicator of this trend, our non-credit computer classes are always filled and the demand is hard to meet. Lastly, almost ever daily interaction like shopping and banking involve some form of technology. IBM has just announced an affordable technology that will allow two telephone callers to see each other and a personal computer that will control and be part of the average household's entertainment center. Can we afford not to?

WHEN

Availability of labs:

The four (IBM) DOS based computer labs / classrooms located in the AD building and the MacIntosh computer lab / classroom located on the second floor of the library are currently open Monday through Friday from 8:00 am until 9:30 pm, as well as on Saturdays from 8:00 am until 1:30 pm. During these time the labs are occupied by credit and non-credit classes for approximately 95 hours each week. The labs are open for general use approximately 205 hours each week.

The lab / classroom scheduling can be arranged to accommodate the need for our students to acquire computer and technology based skills. In general, the afternoons, early evenings, and Saturdays are available for students to complete assignments and to explore.

HOW

Technology across the Curriculum:

Technology can be incorporated into existing courses similar to the use of a slide rule or graphic calculator for math. There is no need to add new courses, just a little redesign or re-purposing.

For example; since most of LCCC English composition courses are taught with wordprocessing software where papers are produced from printers and not typewriters other professors from other disciplines could require term papers, lab reports, etc. be produced using a wordprocessor. This example is just one simple and easy method for introducing technology across the curriculum. The professor benefits from cleaner, more accurate papers in which to grade more speedily, and the student benefits from the flexibility of a wordprocessor and not needing to be an expert typist. The microcomputer labs are open 205 hours a week just for this purpose.

LCCC has the following hardware and software available for faculty and student use:

Hardware:

The current inventory of LCCC PC hardware approximately includes 25 Apple II models, 30 MacIntosh, and 170 IBM PC's and clones, each of which is connected or networked to a printer or plotter, available for use by students and faculty.

Software:

The following departments currently possess software related to their program of study:

Anatomy	Indoor Environment Tech
Automotive	Library
Biology	Math
Business	Medical Assisting
CAD / CAM	Nursing
Chemistry	Physics
Computer Information Systems	Respiratory Therapy
Electronics	Science
Engineering	Social Sciences
English	Sociology

A sample of general wordprocessing, spreadsheet, database, and educational software follows:

Apple Utilities (Basic DOS & Pascal)
College Aptitude Reading
DBase III+ & IV
DOS
First Choice
Grammatik
Harvard Graphics
Interviewing
Keyboarding & Skill Development
MacDraft, MacDraw, MacPaint
Medical Dictionary
Norton Utilities
PC Solve
PC Tools
Printshop
Quattro Pro
Tools for Writers
Visitrend & Visiplot
Wordperfect

Clicart
Da Vinci Series 5 Vols
Diagnostics
Find & Follow Up Job
First Choice
First Publisher
How to Get & Hold a Job
Job Opportunities
Lotus 1-2-3
MacWrite
Microsoft Word
Pagemaker
Peachtree Accounting
PFS: Professional Write
Professional Resume Writer
Student Atlas USA & World
Typing Tutor
Vocabulary Skills
Wordstar 2000

Office of Instructional Technology
November 11, 1991

Critical Test Review

Title: The Collegiate Assessment of Academic Proficiency (CAAP)

Author: College Level Assessment and Survey Services

Publisher: The American College Testing Program (ACT)

Cost: Institutions are charged a participation fee of \$175 per year.

There are five objective tests available at a rate of \$6.50 per student for each student taking a single objective test (first 500 students) or \$12.00 per student for each student taking more than one of the objective tests (first 500 students).

An essay form of the Writing Test is available at the following rates per student: \$1.50 for local scoring and with the purchase of an objective test, \$3.50 for local scoring only, and \$6.50 for the use of ACT scoring.

Domains of Functioning and Purpose

"CAAP has been developed in response to requests from institutions of higher education for a standardized college-level examination that covers general education skills of students at the end of their sophomore year. The examinations are designed to measure selected academic skills that are essential to the general education core curriculum of the first two years of college and that serve as a foundation for success in the upper-level college courses. CAAP measures achievement in reading, writing, mathematics, science reasoning, and critical thinking" (pg 3).

"CAAP is intended to have two main purposes: program evaluation and individual evaluation One of the goals of CAAP is to help institutions improve their instructional programs by measuring and reporting, on a *group basis*, student progress in acquiring general education skills and performance differences in fundamental skill areas for selected groups within an institution" (pg 4).

In particular, one purpose for which the CAAP has been pilot tested is to "indicate change from one educational point to another. ... *If it is determined that the skills measured by CAAP are taught in core courses*, then the difference between the mean score of a group of students who have completed a particular core and the mean

score of a group of students who have not completed the core curriculum may be viewed as a measure of change that occurred during the course of the program" (pg 4).

Target Population

The CAAP is intended for use with college undergraduates. It is designed to measure skills acquired in the general education component of the core curriculum during the first two years of an undergraduate's education.

Technical Characteristics

Reliability Internal consistency of the CAAP is reported as follows (pg 31):

	Freshmen		Sophomores	
	Form 88A	Form 88B	Form 88A	Form 88B
Writing Skills	.93	.93	.95	.93
Mathematics	.76	.78	.80	.79
Reading	.84	.81	.88	.85
Critical Thinking	.82	.78	.87	.82
Science Reasoning	.82	.76	.87	.86

The standard error of measurement is reported as follows
(pg 31):

	Freshmen		Sophomores	
	Form 88A	Form 88B	Form 88A	Form 88B
Writing Skills	3.65	3.47	3.44	3.47
Mathematics	2.47	2.45	2.45	2.44
Reading	2.72	2.63	2.62	2.53
Critical Thinking	2.55	2.54	2.40	2.46
Science Reasoning	2.95	2.96	2.90	2.85

Validity Content validity was established through the use of experts during the development of the instrument and through refinement by pilot testing. Concurrent validity, a form of criterion validity, research resulted in the following correlations of the sophomore cumulative GPA with test scores on the CAAP Writing Skills ($r = .36$), Mathematics ($r = .35$), Reading ($r = .38$),

and Critical Thinking ($r = .34$). Predictive validity, another form of criterion validity, research yielded the following correlations: junior year English GPA and the Critical Thinking score ($r = .32$), and the Writing Skills score ($r = .25$), and the Reading score ($r = .23$); junior year mathematics GPA and the Mathematics score ($r = .23$); and the junior year cumulative GPA and the Critical Thinking score ($r = .35$).

To establish the validity of the CAAP as a measure of educational change, both longitudinal and cross-sectional research was conducted. In the longitudinal design, freshmen were pre-tested in the fall of 1988 and post-tested after completing their sophomore year in spring 1990. The resulting "median difference scores" ranged from 0.9 for the Writing Skills, Mathematics, and Critical Thinking subtests, to 1.1 for the Reading subtest (pg 46). The cross-sectional design tested entering freshmen in fall 1988 and second-semester sophomores in the spring of 1989. The resulting median difference scores ranged from 0.6 for the Mathematics subtest to 1.7 for the Critical Thinking subtest. It is recommended that when using a cross-sectional design adjustments should be made to account for differences in the entering cognitive skills of freshmen and sophomores. Using unadjusted cross-sectional data may tend to overestimate change.

Construction and Standardization The CAAP was developed over a period of two years through the work of various subject matter expert committees writing and reviewing potential test items. These items were then statistically analyzed by ACT staff for discrimination (.30 or higher) and difficulty levels (mean .63). The CAAP was initially pilot tested in 1988 on a group of over 7,000 undergraduates. Subsequent pilot tests have included the equating of forms 88A and 88B and the establishing of scale scores. These tests consisted of random samples of undergraduates from 127 two- and four-year public and private schools who participated in ACT's "Partners in Progress Research Project." Norms are reported annually based upon the student data collected from the user institutions. Local norms are also reported in the Institutional Summaries sent following each administration.

Adequacy of Technical Characteristics The reported reliabilities are adequate for using the instrument as a form of group evaluation ($r > .6$). Reliabilities reported above $r = .9$ are also adequate for use in evaluating differences between group performances. Note that parallel form and test-retest reliabilities were not reported. Content validity was established for the pilot institutions however, LCCC must establish its own content validity by having members of the content areas review the test. Both criterion validity studies yielded only moderate correlations with the concurrent, sophomore GPA, and predictive, junior GPA, criteria.

NOTE: Information regarding the technical characteristics of the CAAP was available only through ACT.

Format and Administration

The CAAP consists of 6 test modules: the Writing Skills Test, Reading Test, Science Reasoning Test, Mathematics Test, Critical Thinking Test, and the Writing (Essay) Test. Each module requires 40 minutes of testing time. There are currently two forms, 88A and 88B, of the CAAP available for use.

The responses to nine locally developed questions may also be collected. These typically are used to collect further demographic or motivational data. The number and percent of responses are reported for each question. It is recommended that to receive meaningful summary data for these questions students participating in the same testing period must respond to the same set of local questions.

Any number of the modules may be administered separately to a given sample or population for the purpose of collecting individual and group data. Alternatively, the five objective modules may be distributed in a random fashion throughout a given sample or population for the purpose of collecting group data for use in program evaluations and for group comparison. The Writing (Essay) Test may be included in the random distribution format however, it cannot be administered in the same room simultaneously with the objective modules. See attachments for full descriptions of the modules.

Examiner Qualifications

A "Test Supervisor's Report" is included within the testing information purchased by an institution. It is expected that the designated test supervisors will follow the instructions within this report exactly. The test supervisor should also be familiar with ACT's designated test security procedures.

Scoring

The objective test modules are constructed using a multiple-choice format. Standard scores are reported using a scale ranging from 40 (low) to 80 (high) which has a mean of 60 and a standard deviation of 5. Percentile ranks are also reported for the purpose of comparing individuals within the same testing group. Responses to locally developed questions are reported as frequency distributions. The Writing (essay) Test

may be scored locally. ACT provides a four point (increments of .5) "purpose-based" scoring system which has been developed to assist institutions in the scoring of student essays.

Institutions are provided with three reports after each test administration. The Student Report consists of the standard score and percentile rank for each module taken. Two copies are provided for every student tested. The Summary Report consists of frequency distributions, percentile ranks, and descriptive statistics for each test module, as well as frequency distributions for all demographic data collected after each administration. A Subgroup Analyses Report is also provided for which institutions may select up to ten subgroups based on variables used for the summary report. For each group frequency distributions, percentile ranks, and descriptive statistics are reported for each test module taken. Report data is also available on magnetic tape.

Other Issues

Sampling The CAAP modules can be administered to a sample of students either individually or in a spiraled format. ACT recommends that a minimum of 100 students per CAAP test administered should participate in a session. If a spiraled format is followed the results should be used only for program evaluation and/or group comparison.

Attachments

CAAP Descriptions of Each Test Module

Collegiate Assessment of Academic Proficiency

Descriptions of Each Test Module

Writing Skills Test

This 72-item, 40-minute test measures the student's understanding of standard written English in Usage/Mechanics (punctuation, grammar, sentence structure) and Rhetorical Skills (strategy, organization, style). Spelling, vocabulary, and rote recall of rules of grammar are not tested. The test consists of six prose passages, each of which is accompanied by a set of 12 multiple choice test items. A range of passage types is used to provide a variety of rhetorical situations.

A total score and two subscores are provided.

Reading Test

This 36-item, 40-minute test measures reading comprehension as a product of skill in referring, reasoning, and generalizing. The student is required to derive meaning from several texts by: 1) referring to what is explicitly stated; 2) reasoning to determine implicit meanings; and 3) drawing conclusions, comparisons, and generalizations beyond the texts. The test consists of four prose passages of about 900 words each that are representative of the level and kinds of material commonly encountered in college curricula. Because reading skills may be employed differently in varying materials, passages selected from published sources include fiction and nonfiction from the humanities, the social sciences, and the natural sciences. Each passage is accompanied by a set of nine multiple choice test items.

A total score and two subscores are provided.

Science Reasoning Test

This 45-item, 40-minute test measures the student's abilities in scientific reasoning. The content is drawn from biology, chemistry, physics, and the physical sciences. Emphasis is on scientific reasoning skills, rather than recall of scientific content or a high level of skill in mathematics or reading ability. The test consists of eight units, each of which contains scientific information and a set of multiple choice questions. Each stimulus conforms to one of three formats listed below.

- Data Representation
- Research Summaries
- Conflicting Viewpoints

A total score is provided.

Writing Skills Test

Content Area	Proportion of Test	Number of Items
Usage/Mechanics	.44	32
Punctuation	.06	6
Grammar and Usage	.11	8
Sentence Structure	.25	18
Rhetorical Skills	.56	40
Strategy	.21	15
Organization	.14	10
Style	.21	15
Total	1.00	72

Reading Test

Content Area	Proportion of Test	Number of Items
Referring	.20-.25	7-9
Reasoning:		
Inferring	.61-.72	22-26
Applying	.06-.14	3-5
Total	1.00	32

Science Reasoning Test

Content Area	Format	Proportion of Test	Number of Items
Biology	} Data Representation Research Summaries Conflicting Viewpoints	.33	15
Physical Sciences			
Chemistry		.53	24
Physics		.14	6
Total		1.00	45

Collegiate Assessment of Academic Proficiency

Descriptions of Each Test Module

Mathematics Test

This 35-item, 40-minute test measures students' mathematical reasoning ability to solve mathematical problems encountered in many postsecondary curricula. It emphasizes quantitative reasoning rather than the memorization of formulas. The content tested includes pre-, elementary, intermediate and advanced algebra, coordinate geometry, trigonometry, and introductory calculus.

A total score and one subscore (through college algebra) are provided.

Critical Thinking Test

This 32-item, 40-minute, multiple-choice test measures the ability to clarify, analyze, evaluate, and extend arguments. An argument is defined as a sequence of statements which includes a claim that the conclusion follows from the other statements. The test consists of four passages that are representative of the kind of issues commonly found in a college curriculum. A passage typically presents a series of subarguments in support of a more general conclusion or conclusions. Each passage presents one or more arguments and uses a variety of formats, including case studies, debates, dialogues, overlapping positions, statistical arguments, experimental results, or editorials.

A total score is provided for each of the two essays.

Writing (Essay) Test

The design of the Writing Test is based on the assumption that the skills most commonly taught in college-level writing courses and required in upper division college courses across the curriculum include: formulating an assertion about a given issue; supporting that assertion with appropriate evidence; organizing and connecting major ideas; and communicating using good writing skills in such areas as mechanics, sentence structure, and command of the language.

Each of the two 20-minute writing tasks is defined by a short prompt that presents an issue on which the examinee must make a decision, take a position, and support that position. The prompts are constructed so the required background knowledge and experience are within the command of college sophomores.

A score is provided for each of the two essays and a composite score reflecting the average of the two individual scores.

Mathematics Test

Content Area	Proportion of Test	Number of Items
Pre-Algebra and Elementary Algebra	.20	7
Intermediate Algebra and Coordinate Geometry	.29	10
College Algebra	.29	10
Trigonometry	.11	4
Calculus	.11	4
Total	1.00	35

Critical Thinking Test

Content Area	Proportion of Test	Number of Items
Analysis of the Elements of an Argument	.62	20
Evaluation of an Argument	.19	6
Extension of an Argument	.19	6
Total	1.00	32

Writing (Essay) Test

CAAP WRITING TEST SCORE-POINT DESCRIPTION

Upper-range papers. These papers clearly engage the issue identified in the prompt and demonstrate superior skill in organizing, developing, and conveying in standard written English the writer's ideas about the topic.

- 6 Exceptional
- 5 Superior

Mid-range papers. Papers in the middle range demonstrate engagement with the issue identified in the prompt but do not demonstrate the evidence of writing skill that would mark them as outstanding.

- 4 Competent
- 3 Adequate

Lower-range papers. Papers in the lower range fail in some way to demonstrate proficiency in language use, clarity of organization, or engagement of the issue identified in the prompt.

- 2 Weak
- 1 Inadequate

Unratable papers. Papers receiving this score are blank, off the task, completely illegible, or written in a language other than English.

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Appendix IV

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